

THE BIMARISTANS IN THE ISLAMIC EAST: CENTERS OF MEDICINE AND EDUCATIONAL INSTITUTIONS

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ABSTRACT

The bimaristans are among the most prominent features of the scientific and medical renaissance in Islamic civilization. They emerged, especially in the Islamic East, as integrated institutions that combined medical treatment with advanced educational functions. These bimaristans represented a qualitative development in the concept of healthcare, as they transcended being mere places for the treatment of patients to become scientific centers where medical sciences were taught, and research and training activities were conducted. These activities contributed to honing the skills of physicians and expanding the scope of medical knowledge.

Physicians working in these bimaristans, whether Muslim or from the people of the dhimmah, enjoyed a fertile scientific environment conducive to exchanging experiences and clinical experimentation. This made the bimaristans an open field for applying medical theories derived from Greek, Indian, and Persian works, and a home for the development of practical educational curricula based on direct observation and clinical diagnosis. The bimaristans hosted many prominent figures in the history of medicine, such as Al-Razi, Ibn Sina, and Ibn al-Haytham, who contributed to integrating medical experience with systematic observation and scientific reasoning.

Moreover, these bimaristans helped form a generation of learners by adopting the clinical education system, which is considered one of the earliest forms of applied education in medical history. Students had regular academic programs overseen by senior physicians, which included theoretical lessons and case studies. This allowed learners to gain a deep understanding of diagnostic and treatment methods. Historical documents show that some bimaristans awarded certificates to physicians after completing their training, reflecting the institutional level of these centers.

In light of these factors, the bimaristans in the Islamic East are seen as advanced models in the integration of healthcare services and medical education. They played a pivotal role in establishing the foundations of institutional medicine and contributed to the Islamic civilization with a rich intellectual and humanitarian legacy that remained influential for centuries.

Keywords: Bimaristans, Islamic East, Centers, Medicine, Educational, Institutions.

INTRODUCTION

Islamic history witnessed a scientific renaissance and a civilizational flourishing unlike any other, covering various aspects of life, including medicine and healthcare. This development resulted from several factors, the most important of which was the great attention the Islamic state paid to public health, considering it an integral part of Islamic teachings that emphasized the importance of self-care. The bimaristans, or maristans, were among the greatest achievements that contributed to providing advanced healthcare services. These places were not merely for treating patients but were distinguished models of the integration of practical medicine and theoretical education.

First: Its Name, Origin, and Types

- **Its Name:** Before delving into the subject, it is necessary to clarify the meaning of the term "Bimaristan": **Bimaristan** is a word of Persian origin, composed of two parts: "Bimar," meaning "sick" or "ill," and "Stan," meaning "house" or "place." Therefore, its meaning is "house of the sick." Over time, it merged into a single word, "Bimaristan," in common usage, and this term⁽¹⁾ came to refer to hospitals in the Islamic era. It is also sometimes called Dar al-Shifa (House of Healing)⁽²⁾.

- **Its Origin**

Muslims consider the tent of Rufaida al-Aslamia to be the first mobile charitable field hospital in Islam⁽³⁾. The Prophet Muhammad (peace be upon him) ordered it to be set up near the battlefield to treat the wounded. In the year 5 AH (626 AD), when Sa'd ibn Mu'adh⁽⁴⁾ was struck by an arrow, the Prophet said to his people: "Place him in Rufaida's tent until I return"⁽⁵⁾.

Most sources and references, as mentioned earlier, attribute the establishment of the first Bimaristan in Islam to the Umayyad Caliph Al-Walid ibn Abd al-Malik. After its construction, he appointed specific physicians for it and provided them with salaries, in addition to his efforts to isolate lepers to prevent the spread of infection and avoid mixing them with the general population⁽⁶⁾. However, the sources do not mention the location where Al-Walid established the Bimaristan⁽⁷⁾.

• **Types**

Bimaristans in the Arab Islamic state were classified into two main types: fixed and mobile (portable). Although both types provided healthcare services to patients, they differed in terms of location and organization.

1. **Fixed Bimaristan**

This type of Bimaristan was established in specific locations to provide healthcare services. Fixed Bimaristans became prominent in many Islamic countries, especially in major capitals such as Baghdad, Cairo, and Damascus⁽⁸⁾.

2. **Mobile (Portable) Bimaristan**

This type of Bimaristan moved from place to place based on the prevailing diseases and epidemics, as well as during times of war. This type was known to the Muslim caliphs, kings, sultans, and their physicians. It is likely that they were the first to establish it, as it was mentioned in various cases. It was sent to regions that did not have a fixed Bimaristan or those affected by an epidemic or contagious disease⁽⁹⁾. This is evident from a letter sent by Ali ibn Isa⁽¹⁰⁾ to Sinan ibn Thabit⁽¹¹⁾, which states: "I have thought about those in the land of the black people, and it is certain that there are patients there who do not have a physician, as the land is devoid of doctors. Therefore, I advise you, by God's grace, to send physicians and a store of medicines and drinks to travel the land and remain in each district as long as necessary, treating those in need and then moving to other places. Sinan did so"⁽¹²⁾.

Another type of mobile hospital is called "Bimaristanat al-Sabil," which includes physicians who accompany pilgrims during their journey to perform the Hajj in Mecca. This type emerged during the reign of Muawiya ibn Abi Sufyan and was equipped with medicines, equipment, and doctors to treat the sick⁽¹³⁾.

Another type of mobile Bimaristan is called "Emergency Stations." This type is set up near places where people gather or near mosques. Physicians take turns attending to the sick day and night, usually during holidays, seasons, and festivals⁽¹⁴⁾.

There is also another type of Bimaristan known as "Military Bimaristans." This type accompanies the army during wars and contains a group of physicians, pharmacists, and medical equipment necessary for treatment. The reason for establishing such a type of Bimaristan was due to the continuous wars in the Islamic state⁽¹⁵⁾.

The portable Bimaristans' work was not limited to that alone, but extended to the care of prisoners in their jails. This is clearly evident from a letter sent by the minister Ali ibn Isa to the physician Sinan ibn Thabit, which stated: "May God prolong your life concerning the matter of those in the prisons. They are not exempt, given their large numbers and the poor conditions of their places, from contracting diseases, and they are unable to manage their needs or consult with physicians about their illnesses. Therefore, it is proper, may God honor you, to assign doctors who visit them every day, bringing with them medicines, drinks, and whatever they need, and instruct them to visit all the prisons, treat the sick within them, and relieve their ailments as they prescribe, God willing." Sinan did so"⁽¹⁶⁾.

These centers were among the most prominent achievements of the caliphs, sultans, princes, ministers, and the contributions of wealthy individuals and charitable men and women, who established them seeking the pleasure of Allah, and they endowed many charitable waqfs⁽¹⁷⁾. Their goal was to provide alms, leave a lasting legacy, and serve humanity⁽¹⁸⁾.

It is worth mentioning that these centers were simple in the beginning, but they developed along with the advancement of time and the rise of civilization, especially during the Abbasid era, when medicine reached a high level of progress due to their interest in knowledge and scholars⁽¹⁹⁾.

Additionally, scholars recognized that although medicine is an empirical science, it cannot be understood or studied correctly without direct interaction with patients. Therefore, Bimaristans were considered the best place for practical medical study, as they provided students with the opportunity to engage with various medical cases⁽²⁰⁾.

These institutions were not limited to being places for treating patients; they were also regarded as prestigious medical schools where students combined theoretical study with practical observation under the supervision of specialized professors and scholars⁽²¹⁾. They were equipped with large libraries full of medical works, making them a fundamental reference for both students and scholars alike⁽²²⁾.

One researcher pointed out this integrated role of the Bimaristan by stating: "Bimaristans did not limit their role to treatment and healing only; they were true university hospitals and served as a complete system for training and teaching in medical sciences..."⁽²³⁾.

In general, the Bimaristan was divided into two separate sections: one for males and the other for females. It included specialized halls for different types of diseases, such as a hall for internal diseases, another for ophthalmology (eye medicine), one for surgery, and another for splinting. Each of these departments had its own dedicated staff who cared for the patients and provided food and treatment with great attention⁽²⁴⁾.

Work at the Bimaristan was carried out by specialized doctors in various branches of medicine, such as internists, surgeons, dentists, ophthalmologists, and others. Each group had a head known as "Chief of Physicians." Among the prominent Eastern doctors who held this title was Georgius ibn Bakhtishu⁽²⁵⁾, followed by his son Bakhtishu, whom Harun al-Rashid appointed to this position, saying to him: "You will be the Chief of Physicians, and to you, they will listen and obey"⁽²⁶⁾. This title was also held by the renowned physician Ibn Sina, who was known by another title in the same context, "Saur," which means in Syriac "the one who inspects the patients." A notable person who held this title was Abu Bakr al-Razi⁽²⁷⁾.

The person who held this position was responsible for overseeing the doctors and granting them permission to treat patients⁽²⁸⁾. He also had another duty: to deliver medical lectures to the students of science, to benefit them⁽²⁹⁾. These lectures were given in an interactive practical style, where the doctor would sit to examine the patients, diagnose them, and prescribe the appropriate treatment, explaining to the students his method of diagnosis and treatment. Alongside the doctor were a group of supervisors and workers who assisted in patient care and implemented the doctor's instructions. The doctor would record the details of the treatment and dietary instructions for the patient, and place them next to the patient's bed to ensure accuracy in implementation. After his rounds, the doctor would sit in a special chamber within the Bimaristan, devote himself to reviewing scientific books, and gather around him a group of medical students who were under training. They would engage in medical discussions and scientific debates, and this academic activity would continue for many hours before the doctor returned home⁽³⁰⁾.

The supervisors and workers operated on a shift system. For example, some chief physicians had shifts lasting two days and two nights, just as the physician Gabriel ibn Abdullah ibn Bakhtishu⁽³¹⁾ had a shift.

Second: Prominent Bimaristans Where Eastern Physicians Worked

1- Bimaristan of Jundishapur

The Bimaristan of Jundishapur in Persia is considered one of the oldest medical institutions from ancient times, predating the rise of Islam. It was established during the reign of Khosrow⁽³²⁾ in the year (555 AD) to teach medicine and philosophy⁽³³⁾. This Bimaristan had a significant impact on the development of scientific and cultural activities, as it taught medicine and various other sciences⁽³⁴⁾. Its influence grew after the Nestorian monks⁽³⁵⁾ sought refuge there after being expelled from Edessa⁽³⁶⁾ by the Byzantines due to doctrinal disputes. Additionally, Greek philosophers who were exiled were welcomed by Khosrow, and he treated them kindly. He also brought a number of Indian and Egyptian scholars to the Bimaristan and supported the translation of Greek, Indian, and Persian books. This contributed to the prominence of the Bimaristan and brought it to the peak of its greatness⁽³⁷⁾. The Muslims became acquainted with this Bimaristan when they conquered Persia in the year (19 AH / 640 AD) during the reign of Caliph Umar ibn al-Khattab. This encounter marked the meeting of Arab civilization with Greek and Eastern Islamic civilizations, which played a role in transferring knowledge to Islamic centers of learning⁽³⁸⁾. After the migration of doctors, scholars, and philosophers from Jundishapur to Baghdad, its importance gradually declined until it eventually faded. Only ruins remain that hint at its original location. Ibn al-Nadim⁽³⁹⁾ mentioned that Yaqt al-Hamawi passed through this town several times but found only ruins and abandoned remnants whose true history could only be understood through the transmission of news. Some of the most notable physicians who worked at this Bimaristan include:

A- George ibn Gabriel: Sources⁽⁴⁰⁾ mention that he was appointed head of the Bimaristan of Jundishapur before being summoned by the Abbasid caliph al-Mansur to Baghdad.

B- Bakhtishua ibn George: He succeeded his father in managing the Bimaristan despite al-Mansur's attempts to bring him to Baghdad. According to reports, he told George: "Send someone to bring your son to us, for it has reached me that he is like you in medicine." George responded, "Jundishapur needs him, and if he leaves, the Bimaristan will suffer. The people of the city go to him when they are sick"⁽⁴¹⁾. He remained in Jundishapur until al-Mahdi Abbasid invited him to Baghdad⁽⁴²⁾.

C- Isa ibn Saharbakht: A student of George, Isa held a prominent position in his time due to his medical skills and scientific contributions, which earned him widespread recognition in medical circles. He wrote several medical works that reflected his knowledge and expertise. Isa stayed at the Bimaristan and served the people of Jundishapur. Al-Mansur requested him through George, who spoke highly of him, but Isa refused, preferring to stay in the Bimaristan. As a result, George had to send Isa ibn Shahla in his place⁽⁴³⁾.

D- Sergius: A student of George, Sergius was the manager of the Bimaristan in the absence of his teacher⁽⁴⁴⁾.

E- Masoiah Abu Yuhanna: He worked as a pharmacist at the Bimaristan, specializing in the preparation of medicines. He remained there for a long period, gaining extensive experience and knowledge of medicines and their properties⁽⁴⁵⁾. Masoiah was renowned for his ability to diagnose diseases and select the appropriate treatments, to the point where he was considered one of the most knowledgeable in his time in the field of pharmacology, which helped raise the level of medical services at the Bimaristan ⁽⁴⁶⁾.

F- Dahishtak: He served as the head of the Bimaristan, and his nephew, Michael, worked alongside him, managing the Bimaristan's affairs and overseeing its medical activities. Dahishtak was invited to Baghdad to take charge of the Bimaristan of Harun al-Rashid but declined the offer, justifying his refusal by explaining that his work at the Bimaristan of Jundishapur was voluntary (Hibsa) and that he did not receive any salaries or funds from the caliph. He also emphasized that his primary responsibility was to serve the Bimaristan in Jundishapur⁽⁴⁷⁾.

G- Sabor ibn Sahl: He became the head of this Bimaristan until his death in the year (255 AH / 869AD)⁽⁴⁸⁾.

From the above, Jundishapur is considered an advanced model for the activities of physicians and officials in the Islamic state. In this Bimaristan, diseases were treated, and new physicians were trained. It became a reference for many physicians known for their expertise and medical studies, playing a significant role in bringing medical sciences to Baghdad.

2- Bimaristan of Al-Rashid

This Bimaristan is considered one of the important health and scientific centers during the Abbasid era, as it stands as a testament to the flourishing of medicine and healthcare during that period. It was ordered to be built by Harun al-Rashid, and the task of supervising its construction and organization was assigned to his personal physician, Gabriel ibn Bakhtishua, while the management of the Bimaristan was handled by the physician Masowiah al-Khuzi⁽⁴⁹⁾.

The Bimaristan was regarded as a comprehensive medical center, offering free medical **services**, a result of the Islamic waqf system that provided significant support for the establishment of such institutions. In addition to medical services, the Bimaristan also served as a distinguished medical school for teaching medicine, containing a lecture hall and a well-stocked scientific library, which allowed students to access important books in various sciences, particularly those related to medicine⁽⁵⁰⁾. Despite the significance of this Bimaristan, it did not last long and faded over time, with no mention of it in the later Abbasid periods⁽⁵¹⁾.

3- Bimaristan of the Barmakids

This Bimaristan is considered one of the prominent medical landmarks in Baghdad during the Abbasid era, and its name is closely associated with the Barmakid family, which contributed some of the most notable figures supporting science and culture during that time, such as Khalid ibn Yahya al-Barmaki⁽⁵²⁾. The sources do not provide details about the exact date of its establishment. Among the Eastern physicians who worked at this Bimaristan was the famous physician and scholar Ibn Dahn al-Hindi, who was known for his expertise in both the Arabic and Indian languages. He was assigned to supervise the Bimaristan, and the sources mention: "It was under his supervision at the Bimaristan of the Barmakids"⁽⁵³⁾. He made significant contributions to enriching scientific knowledge, particularly in medicine, by translating many medical texts from Indian to Arabic⁽⁵⁴⁾. His efforts contributed to the transfer of medical knowledge from India to the Islamic world. Notable books that he translated include: "Mukhtasar al-Hind fi al-Aqariir" and "Istanqar al-Jami," as well as "Sindistak and its Meaning: Safwat al-Najah." Despite the academic prestige of this Bimaristan, it was destroyed after the downfall of the Barmakid family⁽⁵⁵⁾, which resulted in the collapse of their projects, including the Bimaristan, by Harun al-Rashid⁽⁵⁶⁾.

4- Bimaristan al-Muqaddari (306 AH / 918 AD)

One of the most prominent medical landmarks established during the Abbasid era in the 4th century AH / 10th century CE, it was founded at the suggestion of Sinan ibn Thabit for the Abbasid Caliph al-Muqtadir Billah (295-330 AH / 908-932 AD). The Bimaristan was established in the year (306 AH / 918 AD) in the Bab al-Sham area, on the western side of Baghdad⁽⁵⁷⁾, and it was named "Bimaristan al-Muqaddari" after its founder⁽⁵⁸⁾. The caliph allocated a significant amount of his personal funds for its operation, amounting to two hundred dinars per month, demonstrating his strong commitment to this important medical establishment ⁽⁵⁹⁾.

The Bimaristan was distinguished by its organization and management, employing the most skilled physicians, particularly Eastern physicians, including Gabriel ibn Ubayd Allah ibn Bakhtishua, a distinguished expert in the medical field⁽⁶⁰⁾. Abu Bakr al-Razi also served as the head of this Bimaristan ⁽⁶¹⁾. In 319 AH / 931 CE, following a medical error by one of the practitioners that led to the death of a commoner, Caliph al-Muqtadir issued an order to improve healthcare standards and summoned Sinan ibn Thabit to oversee the examination of all physicians in Baghdad. A total of 680 physicians were tested to assess their medical knowledge, and those who had worked for the sultans were excluded from the test. This step ensured the competence of the medical practitioners⁽⁶²⁾. Physicians were required to submit a scientific thesis, similar to a doctoral dissertation, which was examined by the head of the medical profession. If successful, the physician was granted a license to practice. Those found guilty of causing harm to patients were held legally accountable and were required to compensate for the damages, though corporal punishment or fines could be applied in some cases. If a physician's error caused significant harm,

they would be legally condemned, especially if the harm exceeded one-third of the patient's body⁽⁶³⁾. It is worth mentioning that before this reform by Caliph al-Muqtadir, anyone could practice medicine with no restrictions, often merely by reading a medical book⁽⁶⁴⁾. This reform introduced the system of medical exams across the Muslim world, and from then on, any medical student completing their studies had to apply to the head physician of their country to obtain a license to practice⁽⁶⁵⁾. The Bimaristan al-Muqaddari met its end at the hands of the Mongols⁽⁶⁶⁾, as it was completely destroyed during their siege of Baghdad in 656 AH / 1258AD, marking the fall of the Abbasid capital and the end of the Abbasid Caliphate. It is important to note that the devastation did not affect only the Bimaristan al-Muqaddari, but the entire cultural and intellectual heritage of Baghdad, including educational institutions, scientific establishments, and libraries⁽⁶⁷⁾.

5- Bimaristan al-Ray

A significant medical center in the city of Ray, known for its cultural and scientific contributions in the Eastern Islamic world, this Bimaristan is believed to have existed for a long time⁽⁶⁸⁾. The sources mention that Muslims established this Bimaristan in Ray, but the founder is not specified⁽⁶⁹⁾. One of the most famous figures associated with its administration was the renowned physician Abu Bakr al-Razi, who was reported to have been in charge of managing this Bimaristan. The sources mention: "He was responsible for managing the Bimaristan of Ray"⁽⁷⁰⁾, and he oversaw its operations before moving to settle in Baghdad⁽⁷¹⁾.

6- The Bimaristan of Isfahan

One of the important medical centers in the lands of the Persians during the Islamic era, it played a major role in providing healthcare. Despite the limited information available about this bimaristan, it had a significant impact on the development of medicine. One of the prominent figures associated with this bimaristan is the famous physician Abu Ali ibn Mandooh al-Isfahani, a leading figure in Persian medicine, known for his writings and scientific works⁽⁷²⁾. He sent a letter to those responsible for treating patients at the Isfahan Bimaristan, reflecting his concern with organizing medical work within the bimaristan and providing guidance to the doctors working there⁽⁷³⁾.

7- The Bimaristan of Shiraz

This is one of the significant bimaristans in Persia that provided healthcare services to the people of Shiraz. What distinguishes this bimaristan is its association with prominent physicians in the field of medicine, most notably the renowned physician Qutb al-Din al-Shirazi, who "arranged for a doctor at the bimaristan"⁽⁷⁴⁾.

8- The Bimaristan of al-Adhudi

This is one of the most notable medical centers during the Abbasid era, built by Fana Khusrau Adhudi al-Dawla⁽⁷⁵⁾ in the western part of Baghdad, near the holy shrine of Dar al-Riq⁽⁷⁶⁾, on the land of the Qasr al-Khuld⁽⁷⁷⁾. Its construction took four years (368-372 AH / 978-982 AD)⁽⁷⁸⁾, and Ibn al-'Abri⁽⁷⁹⁾ mentioned that this bimaristan was inaugurated in (371 AH / 981 AD). Adhudi al-Dawla endowed it with large assets, and al-Razi is credited with the idea of choosing the location for the bimaristan⁽⁸⁰⁾.

Adhudi al-Dawla equipped it with the best medical equipment, medicines, and supplies to ensure its continuity⁽⁸¹⁾. He also added a special bimaristan for the insane, where more than 60 doctors⁽⁸²⁾ worked. He then selected a distinguished medical staff, gathering more than 100 doctors. He chose fifty of them, with al-Razi among them, then selected ten from them, and al-Razi was again among them. He chose three from these ten, and al-Razi was one of them. It became clear that al-Razi was the best among them, so he was appointed head of the bimaristan⁽⁸³⁾. This was not the first time al-Razi entered the bimaristan. When he first arrived in Baghdad, he visited it to learn about its system and medical services. During his visit, he met the pharmacist working there, and they discussed medicines and their origins. The pharmacist told him a story about a medicine called "Hayat al-'Alam" (The Life of the World), explaining that its name came from an old medical incident involving a descendant of Asclepius⁽⁸⁴⁾, named Aflulun, who recovered from a painful tumor by using a plant that grows on the riverbank. Al-Razi was deeply moved by the story and expressed his admiration. On another visit to the bimaristan, al-Razi observed a rare medical case of a boy born with one head and two faces. He asked the doctors for an explanation of this phenomenon, listened to their opinions, and was impressed. He continued asking questions and gathering information about the various medical cases he saw in the bimaristan, which sparked his deep interest in medicine⁽⁸⁵⁾.

Among the doctors who worked at this bimaristan was Jibril ibn Ubayd Allah⁽⁸⁶⁾. The bimaristan was also managed by the physician Abdul Rahim al-Marziani⁽⁸⁷⁾, who continued to manage it until his death⁽⁸⁸⁾. Another notable physician who worked there was Abu al-Faraj Abdullah ibn al-Tayyib⁽⁸⁹⁾, a contemporary of the famous physician Ibn Sina, who praised him for his work in medicine but criticized him in philosophy, saying: "We receive books written by Sheikh Abu al-Faraj ibn al-Tayyib in medicine, and we find them correct and satisfactory, unlike his writings in logic and natural sciences⁽⁹⁰⁾, which are inconsistent." Abu al-Faraj was also known for practicing medicine, treating patients, and studying the craft of medicine. Medical lectures were held at the bimaristan, and important works, such as the book *Al-Aqrabadhin* by Sapur ibn Sahl al-Jundisaburi, were read there⁽⁹¹⁾. However, neglect began to affect this bimaristan, and by the end of the Ilkhanid era, it was described as: "A large ruined palace, with only the remnants of its structure left⁽⁹²⁾." Its remnants disappeared, and nothing remained due to the

spread of diseases and epidemics. However, Sheikh Abu Mansour ibn Abdul Malik ibn Yusuf, one of the prominent figures of his time, known for his generosity and referred to as the "Sheikh of the Noble," renovated the bimaristan. He provided it with twenty-eight doctors and three pharmacists and equipped it with medical supplies after it had been empty of doctors and medicines⁽⁹³⁾. Despite this, it remained one of the greatest medical institutions of its time⁽⁹⁴⁾.

9- The Bimaristan of Merv

This bimaristan was one of the medical centers in the city of Merv, which was famous for its scientific and cultural status in the Islamic world. It was mentioned in the writings of scholars, including the physician Isa ibn Maseh, who said: "As for us in the Merv Bimaristan, we use harmful..."⁽⁹⁵⁾. This confirms the existence of this bimaristan and its use of herbs and medicinal plants to treat patients. Notably, Isa ibn Maseh was one of the leading physicians of his time, described as a virtuous figure in his profession. He was distinguished by his excellent approach to treating patients and left behind a significant scientific legacy in his writings, which covered both preventive and therapeutic medicine. His notable works include the book *Qiwa al-Agheziya* (The Strength of Foods), which highlights the medicinal properties of food, and *Man La Yahduruhu Tabeeb* (For Those Who Do Not Have a Doctor), a practical medical guide for those without access to a physician. Isa ibn Maseh's work extended beyond daily medical practices to include precise scientific topics such as bloodletting, cupping therapy, the use of health baths, and the study of procreation, reflecting the depth of interest at the Merv Bimaristan in advancing medicine as both an applied and theoretical science⁽⁹⁶⁾.

Although detailed information about this bimaristan is scarce, it is considered a model for the medical centers that flourished in the Islamic world, which combined treatment and the promotion of scientific research.

Supervision of the Muhtasib over the Work of Doctors

The officials in the Arab Islamic state were keen on establishing precise and strict regulations for industries and professions, according to special laws to prevent fraud and supervise craftsmen and industries. This system was called *Al-Hisbah*, and the person responsible for its implementation was called the *Muhtasib*. His responsibility included overseeing the weights and measures and all matters related to *Al-Hisbah*⁽⁹⁷⁾ as part of the principle of enjoining good and forbidding evil, based on the verse: (وَلْتَكُنْ مِنْكُمْ أُمَّةٌ يَدْعُونَ إِلَى الْخَيْرِ وَيَأْمُرُونَ بِالْمَعْرُوفِ وَيَنْهَوْنَ عَنِ الْمُنْكَرِ) (وَأُولَئِكَ هُمُ الْمُفْلِحُونَ)⁽⁹⁸⁾.

Initially, the Muhtasib's role was limited to supervising markets and streets, as well as preventing professionals from engaging in fraud. However, as life developed and industries diversified, his role expanded to include overseeing various medical professions. Thus, barbers, blood-letters, pharmacists, doctors, oculists, and others were placed under supervision⁽⁹⁹⁾.

The Muhtasib was responsible for organizing the selection of doctors and ensuring their knowledge and competence by overseeing their examinations. He also made them swear the Hippocratic Oath, which included commitments such as not prescribing harmful medicines, avoiding the use of poisons, refraining from prescribing drugs that could induce abortions for pregnant women or contraception for men, and maintaining modesty when treating patients. He also required them to keep patients' secrets with the utmost confidentiality. The Muhtasib enjoyed wide-ranging powers, including inspecting the shops of herbalists and pharmacists and selecting those with experience and knowledge in medicines and drugs. He was also responsible for weekly inspections of medicinal liquids, testing them for taste, smell, and color. If any liquid was found to be spoiled, he would order the pharmacist to stop selling it and destroy it immediately. Additionally, the Muhtasib was tasked with testing blood-letters, allowing them to practice only if they demonstrated proficiency in the anatomy of organs, muscles, arteries, and veins, ensuring that no mistakes were made that could harm or cause the death of a patient. He also required them to conduct bloodletting only under the supervision of a specialist doctor. Furthermore, he supervised barbers and required them to have skill and precision so that the patient would feel no pain. Those who proved their expertise were granted licenses to practice the profession⁽¹⁰⁰⁾.

From the above, it is clear that the role of the Muhtasib in supervising doctors and medical industries was of great importance during the Abbasid era, as it contributed to maintaining the health of society and ensuring the provision of proper medical care. This was due to the Muhtasib's duties of testing the skills of doctors, blood-letters, and barbers, setting strict standards for medical practice, and acting as a regulatory authority to combat fraud and manipulation in medicines and treatments. Additionally, this supervision added an important ethical dimension to the medical profession, requiring doctors to adhere to human values such as respecting patient privacy and avoiding intentional harm.

The bimaristans were not only places for providing treatment but were also considered a complete model combining healthcare and medical education. These centers emerged as advanced institutions that contributed to the development of medicine and the flourishing of civilization in the Islamic world. They relied on the expertise of previous civilizations, such as the Persian civilization, and introduced Muslim doctors to medical writings, benefiting from them. The encouragement of the caliphs, especially al-Mansur, Harun, and al-Ma'mun, played a significant role in the transmission of knowledge, leading to a major leap in the field of medicine. This progress

was evident in the bimaristans, which were managed under a comprehensive system that included administrative, technical, and financial training.

Doctors who worked in these bimaristans contributed scientific writings that became references for teaching and treatment, such as *Al-Aqradhin* by Sapur ibn Sahl and *Al-Hawi* by Abu Bakr al-Razi. These works reflect the advancement of medicine during that period. Thus, these centers formed the fundamental structures for the development of medicine in the Islamic world, contributing to the transfer of medical knowledge and making them a pioneering model in scientific and human history.

CONCLUSION

The Islamic hospitals (Bimaristans) played a significant role in the advancement of medicine during the Islamic Golden Age. They were not only centers for providing medical treatment but also hubs for medical education and research. The integration of knowledge from previous civilizations, coupled with the dedication of scholars and physicians, led to the development of a sophisticated medical system. The supervision of professions by the *Muhtasib* ensured that the practice of medicine maintained high standards, contributing to the protection of public health and the ethical treatment of patients. These institutions served as a model for the development of medical infrastructure, emphasizing the importance of combining practical healthcare with academic learning.

¹⁾ Ibn Nuqtah, *Takmilat al-Ikmal*, 2/617; Ibn Fadl Allah al-'Umari, *Masalik al-Absar*, 3/54; al-'Ayni, *Uqd al-Juman*, 1/162; al-Zabidi, *Taj al-'Arus*, 16/500; 'Isa Bek, *Tarikh al-Bimaristanat*, p. 8.

²⁾ Ibn Fadl Allah al-'Umari, *Masalik al-Absar*, 3/522.

³⁾ Muhammad, *Al-Ta'lim al-Tibbi*, p. 33; Farukh, *Tarikh al-'Ulum 'Inda al-'Arab*, p. 291; Al Sa'd, *Al-'Ulum al-Hadariyya*, p. 330.

⁴⁾ Sa'd ibn Mu'adh ibn al-Nu'man ibn Imru' al-Qays ibn Zayd ibn 'Abd al-Ashhal ibn al-Harith ibn 'Amr ibn Malik ibn Harithah, al-Ansari al-Madani, one of the Companions of the Prophet Muhammad, martyred in the Battle of the Trench in the year 5 AH / 626 CE. See: Ibn Sa'd, *Al-Tabaqat al-Kubra*, 7/417.

⁵⁾ Ibn Sa'd, *Al-Tabaqat al-Kubra*, 3/326; Ibn Hajar al-'Asqalani, *Al-Isabah*, 8/136; 'Isa Bek, *Tarikh al-Bimaristanat*, p. 9.

⁶⁾ Al-'Ayni, *Uqd al-Juman*, 1/162; Ibn al-Faqih, *Al-Buldan*, p. 157; al-Maqrizi, *Al-Mawa'iz wa al-I'tibar*, 4/202; Shahada, *Tarikh al-Ta'lim al-Tibbi*, p. 34.

⁷⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 203.

⁸⁾ Farukh, *Tarikh al-'Ulum 'Inda al-'Arab*, p. 292.

⁹⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 203.

¹⁰⁾ 'Ali ibn 'Isa: Abu al-Hasan 'Ali ibn Dawud ibn al-Jarrah, minister under the Abbasid caliphs al-Muqtadir Billah and al-Qahir Billah, died in 334 AH / 946 CE. See: Al-Khatib al-Baghdadi, *Tarikh Baghdad*, 13/459; Ibn 'Asakir, *Tarikh Dimashq*, 43/121; al-Dhahabi, *Siyar A'lam al-Nubala'*, 15/225.

¹¹⁾ Sinan ibn Thabit ibn Qurrah ibn Marwan, al-Sabi' al-Harrani, Abu Sa'id, a distinguished physician, historian, and astronomer, served three Abbasid caliphs: al-Muqtadir, al-Qahir, and al-Radi; died in Baghdad in 331 AH / 943 CE. See: Yaqut al-Hamawi, *Mu'jam al-Udaba'*, 3/1405; al-Safadi, *Al-Wafi bi al-Wafayat*, 10/286.

¹²⁾ Al-Qifti, *Ikhbar al-'Ulama'*, p. 151; Ibn Abi Usaybi'ah, *'Uyun al-Anba'*, p. 301; 'Isa Bek, *Tarikh al-Bimaristanat*, p. 12.

¹³⁾ Al-Qifti, *Ikhbar al-'Ulama'*, p. 137.

¹⁴⁾ Al-Samarra'i, *Mukhtasar Tarikh al-Tibb*, 1/430.

¹⁵⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 12.

¹⁶⁾ Al-Qifti, *Ikhbar al-'Ulama'*, p. 150; Ibn Abi Usaybi'ah, *'Uyun al-Anba'*, p. 301; Al Sa'd, *Al-'Ulum al-Hadariyya*, p. 335.

¹⁷⁾ *Awqaf* (endowments): singular *waqf*, refers to the act of dedicating assets such as land, orchards, or wells for religious and charitable purposes. With the development of Islamic civilization, an administrative office known as the *Diwan al-Awqaf* was established to oversee such endowments, which supported mosques, schools, monasteries, and other charitable institutions. See: Group of Authors, *Mawsu'at Safir li al-Tarikh al-Islami*, 16/46.

¹⁸⁾ Al Sa'd, *Al-'Ulum al-Hadariyya*, p. 331.

¹⁹⁾ Hamadah, *Al-Maktabat*, p. 144.

²⁰⁾ Shahada, *Tarikh al-Ta'lim al-Tibbi*, p. 18.

- ²¹⁾ Sigrid Hunke, *The Sun of the Arabs Shines on the West*, p. 234.
- ²²⁾ Hamadah, *Tarikh al-Maktabat*, p. 145.
- ²³⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 77.
- ²⁴⁾ Husayn, *Al-Mujaz fi Tarikh al-Tibb wa al-Saydalah*, 1/22.
- ²⁵⁾ Ibn Juljul, *Tabaqat al-Atibba' wa al-Hukama'*, p. 64.
- ²⁶⁾ Al-Qifti, *Ikhbar al-'Ulama'*, p. 82.
- ²⁷⁾ Ibn Abi Usaybi'ah, *'Uyun al-Anba'*, p. 415.
- ²⁸⁾ Al-Qalqashandi, *Subh al-A'sha*, 5/438.
- ²⁹⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 87.
- ³⁰⁾ Sigrid Hunke, *The Sun of the Arabs Shines on the West*, p. 16.
- ³¹⁾ Khasbak, *Al-'Iraq fi 'Ahd al-Mughul al-Ilkhaniyyin*, p. 215.
- ³²⁾ Khosrow: Khosrow Anushirvan ibn Qubadh ibn Firuz, one of the Sasanian kings, ruled for either forty-seven or forty-eight years, and died in 579 CE. See: Al-Suhayli, *Al-Rawd al-Unuf*, 1/140.
- ³³⁾ Al-Fayyumi, *Tarikh al-Fikr*, p. 161.
- ³⁴⁾ Al-Watri, *Tarikh al-Tibb fi al-'Iraq*, p. 16.
- ³⁵⁾ The Nestorians: a sect of Eastern Syriac Christians who lived under the rule of the Persian Empire. See: Hijazi, *Ilm al-Lughah*, p. 177.
- ³⁶⁾ Edessa (al-Ruhā): a grand Roman city containing remarkable monuments, located near Qal'at al-Rum on the northeastern bank of the Euphrates. See: Al-Muhallabi, *Al-Masalik wa al-Mamalik*, p. 110.
- ³⁷⁾ Al-Shatti, *Tarikh al-'Ulam al-Tibbiyya*, pp. 57–58; Husayn, *Al-Mujaz fi Tarikh al-Tibb wa al-Saydalah*, p. 227.
- ³⁸⁾ Al-Suyuti, *Tarikh al-Khulafa'*, p. 106; Al-Sarjani, *Qissat al-'Ulam al-Tibbiyya*, pp. 57–58.
- ³⁹⁾ *Al-Fihrist*, 2/298.
- ⁴⁰⁾ Ibn al-Nadim, *Al-Fihrist*, 2/298; Ibn Abi Usaybi'ah, *'Uyun al-Anba'*, p. 184; Ibn Juljul, *Tabaqat al-Atibba' wa al-Hukama'*, p. 64.
- ⁴¹⁾ Ibn Abi Usaybi'ah, *'Uyun al-Anba'*, p. 164.
- ⁴²⁾ Ibn al-Nadim, *Al-Fihrist*, 2/298; Ibn al-'Ibri (Bar Hebraeus), *Mukhtasar Tarikh al-Duwal*, 1/130.
- ⁴³⁾ Al-Qifti, *Ikhbar al-'Ulama'*, p. 189.
- ⁴⁴⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 64.
- ⁴⁵⁾ Ibn Abi Usaybi'ah, *'Uyun al-Anba'*, p. 219; Al-Zarkali, *Al-A'lam*, 8/211.
- ⁴⁶⁾ Ibn Fadl Allah al-'Umari, *Masalik al-Absar*, 9/391.
- ⁴⁷⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 65.
- ⁴⁸⁾ Ibn al-Nadim, *Al-Fihrist*, 2/300; Al-Shayzari, *Nihayat al-Rutbah*, p. 56; Ibn al-'Ibri, *Mukhtasar Tarikh al-Duwal*, 1/147; Al-Zarkali, *Al-A'lam*, 3/69; Kahalah, *Mu'jam al-Mu'allifin*, 4/201.
- ⁴⁹⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 187; 'Akkaoui, *Al-Mujaz fi Tarikh al-Tibb*, p. 237.
- ⁵⁰⁾ Group of Authors, *Mudhakkirat Ahkam al-Waqf al-Fiqhiyyah*, 1/65.
- ⁵¹⁾ Khasbak, *Al-'Iraq fi 'Ahd al-Mughul al-Ilkhaniyyin*, p. 214.
- ⁵²⁾ Ma'ruf, *Mustashfayat Baghdad*, p. 4; Group of Authors, *Mawsu'at Safir li al-Tarikh al-Islami*, 4/96.
- ⁵³⁾ Ibn al-Nadim, *Al-Fihrist*, 2/152; Al-Hasani, *Nuzhat al-Khawatir*, 1/53.
- ⁵⁴⁾ Khasbak, *Al-'Iraq fi 'Ahd al-Mughul al-Ilkhaniyyin*, p. 214.
- ⁵⁵⁾ The Barmakid Catastrophe: a historical incident during the reign of the Abbasid caliph Harun al-Rashid, in which several members of the influential Barmakid family were executed due to political conflicts and conspiracies, in the year 187 AH / 803 CE. See: Al-Tabari, *Tarikh al-Rusul wa al-Muluk*, 7/323.
- ⁵⁶⁾ Ma'ruf, *Mustashfayat Baghdad*, p. 4.
- ⁵⁷⁾ Al-Qifti, *Ikhbar al-'Ulama'*, p. 151; Ibn Fadl Allah al-'Umari, *Masalik al-Absar*, 9/421; 'Akkaoui, *Al-Mujaz fi Tarikh al-Tibb*, p. 238.
- ⁵⁸⁾ Ibn al-Jawzi, *Al-Muntazam*, 6/146.
- ⁵⁹⁾ Ibn al-Athir, *Al-Kamil fi al-Tarikh*, 6/660; Al-Nuwayri, *Nihayat al-Arab*, 23/54; Khasbak, *Al-'Iraq fi 'Ahd al-Mughul al-Ilkhaniyyin*, p. 215.
- ⁶⁰⁾ 'Isa Bek, *Tarikh al-Bimaristanat*, p. 184.
- ⁶¹⁾ Ibn Fadl Allah al-'Umari, *Masalik al-Absar*, vol. 9, p. 55.
- ⁶²⁾ Ibn Abi Usaybi'a, *'Uyun al-Anba'*, p. 302.

- ⁶³⁾ Al-Muzayni, Al-Madaris al-Tibbiyya, p. 35.
- ⁶⁴⁾ Ma'ruf, Mustashfayat Baghdad, p. 182.
- ⁶⁵⁾ Al-Muzayni, Al-Madaris al-Tibbiyya, p. 37.
- ⁶⁶⁾ The Mongols: A large group of nomadic tribes originally living as herders on the plains of the Central Asian plateau (Mongolian plateau). See: Al-Dīnawari, Al-Akhbar al-Tiwal, p. 217.
- ⁶⁷⁾ Al-Shuhud, Al-Mufasssal fi al-Radd 'ala al-Hadara al-Gharbiyya, vol. 1, p. 86.
- ⁶⁸⁾ Group of authors, Mujaz Dā'irat al-Ma'ārif al-Islāmiyya, vol. 7, p. 2067.
- ⁶⁹⁾ Ibn Hawqal, Surat al-Ard, p. 275; 'Akkaoui, Al-Mujaz fi Tarikh al-Tibb, p. 220; 'Isa Bek, Tarikh al-Bimaristanat, p. 266.
- ⁷⁰⁾ Ibn al-'Ibri, Mukhtasar Tarikh al-Duwal, vol. 1, p. 158; Al-Dhahabi, Siyar A'lam al-Nubala', vol. 14, p. 354; Kahlala, Mu'jam al-Mu'allifin, vol. 12, p. 7; Ibn Khallikan, Wafayat al-A'yan, vol. 5, p. 157.
- ⁷¹⁾ Al Sa'd, Al-'Ulum al-Hadariyya, p. 332.
- ⁷²⁾ Kahlala, Mu'jam al-Mu'allifin, vol. 1, p. 269.
- ⁷³⁾ Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 422; 'Isa Bek, Tarikh al-Bimaristanat, p. 267.
- ⁷⁴⁾ 'Akkaoui, Al-Mujaz fi Tarikh al-Tibb, p. 237.
- ⁷⁵⁾ Ibn Khallikan, Wafayat al-A'yan, vol. 4, p. 54; Al-Halabi, Uns al-Masjun, p. 150.
- ⁷⁶⁾ Al-Salafi, Al-Mashayikha al-Baghdadiyya, vol. 1, p. 229.
- ⁷⁷⁾ Qasr al-Khuld: A palace built by Caliph Al-Mansur in Baghdad on the bank of the Tigris River in 159 AH / 776 CE. Large houses and hospitals were constructed around it, forming a district known as Al-Khuld. See: Yaqut al-Hamawi, Mu'jam al-Buldan, vol. 2, p. 382.
- ⁷⁸⁾ Ibn Kathir, Al-Bidaya wa al-Nihaya, vol. 15, p. 410; Ibn Khallikan, Wafayat al-A'yan, vol. 4, p. 54; Ibn al-Fuwati, Al-Hawadith al-Jami'a, p. 15.
- ⁷⁹⁾ Mukhtasar Tarikh al-Duwal, vol. 1, p. 172.
- ⁸⁰⁾ Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 379.
- ⁸¹⁾ Shahada, Tarikh al-Ta'lim al-Tibbi, p. 35.
- ⁸²⁾ 'Akkaoui, Al-Mujaz fi Tarikh al-Tibb, p. 239.
- ⁸³⁾ Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 380; Al Sa'd, Al-'Ulum al-Hadariyya, p. 336; Hussein, Al-Mujaz fi Tarikh al-Tibb wa al-Saydala, p. 260.
- ⁸⁴⁾ Asclepius: The god of medicine in ancient Greek mythology, believed to have been a real person who later became a myth. See: Al-Fayyumi, Tarikh al-Fikr al-Dini, p. 298.
- ⁸⁵⁾ Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 415; Ibn Fadl Allah al-'Umari, Masalik al-Absar, vol. 9, p. 55.
- ⁸⁶⁾ Al-Qifti, Akhbar al-'Ulama', p. 223.
- ⁸⁷⁾ Al-Marziyani: Abu Ahmad al-Tabib al-Marzabani was from Isfahan, a virtuous scholar in medicine, Sharia, and natural sciences. He held a high position in the Buyid state, served as a judge in Tustar and Khuzestan, and was in charge of the hospital in Baghdad until his death in Tustar in Jumada, 396 AH / 1004 CE. See: Al-Qifti, Akhbar al-'Ulama', p. 177; Al-Zarkali, Al-A'lam, vol. 3, p. 346.
- ⁸⁸⁾ Ibn al-Athir, Al-Kamil fi al-Tarikh, vol. 7, p. 544.
- ⁸⁹⁾ Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 223.
- ⁹⁰⁾ Ibn Fadl Allah al-'Umari, Masalik al-Absar, vol. 9, p. 103.
- ⁹¹⁾ Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 323.
- ⁹²⁾ Khasbak, Al-'Iraq fi 'Ahd al-Mughul al-Ilkhaniyyin, p. 216.
- ⁹³⁾ Ibn al-Athir, Al-Kamil fi al-Tarikh, vol. 8, p. 215; Sidqi, Al-Tawjihāt al-Tarikhiyya fi 'Ilm al-Tibb, p. 128.
- ⁹⁴⁾ Al-Salafi, Al-Mashayikha al-Baghdadiyya, vol. 1, p. 229.
- ⁹⁵⁾ 'Isa Bek, Tarikh al-Bimaristanat, p. 269.
- ⁹⁶⁾ Ibn al-Nadim, Al-Fihrist, vol. 2, p. 298; Ibn Abi Usaybi'a, 'Uyun al-Anba', p. 257.
- ⁹⁷⁾ Rida, Mu'jam Matn al-Lugha, vol. 2, p. 83.
- ⁹⁸⁾ Qur'an, Surah Al-'Imran, verse 104.
- ⁹⁹⁾ Al-Samarra'i, Mukhtasar Tarikh al-Tibb, vol. 1, p. 108.
- ¹⁰⁰⁾ Al-Shayzari, Nihayat al-Rutba, pp. 89, 98, 99.